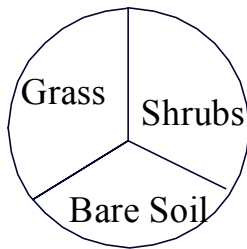




# THE COVEY HEADQUARTERS

Volume 3      Issue 3      Winter 2004

This newsletter issue starts the third year of an effort aimed at cooperators and sportspeople in Missouri to provide information on restoring quail. This is a joint effort of the Missouri Department of Conservation, USDA-Natural Resources Conservation Service, University of Missouri Extension and Quail Unlimited. If you would like to be removed from this mailing list or have suggestions for future articles please contact [jeff.powelson@mdc.mo.gov](mailto:jeff.powelson@mdc.mo.gov) or 816-232-6555 x122 or write to the address shown.



The name of this newsletter is taken from an old concept....that a quail covey operates from a headquarters (shrubby cover). If the rest of the covey's habitat needs are nearby, a covey should be present. We are encouraging landowners to manage their quail habitat according to this concept. Use shrubs as the cornerstone for your quail management efforts. Manage for a diverse grass, broadleaf weed and legume mixture and provide bare ground with row crops, food plots or light disking **right next to** the shrubby area.

## Bobwhite Quail "Buffers" Pay to Farm

by Jeff Powelson, MDC Private Land Conservationist, St. Joseph

On August 4, 2004, President Bush announced a new initiative to increase the population of the northern bobwhite quail by creating 250,000 acres of habitat for the northern bobwhite quail. The bobwhite quail population has declined from an estimated 59 million birds in 1980 to about 20 million in 1999. This new initiative is estimated to naturally increase the quail population by 750,000 birds annually. The initiative (Habitat Buffers for Upland Birds or CP33) will help create 250,000 acres of early successional grass buffers in the form of agricultural field borders. In addition, the initiative will reduce soil erosion and protect water quality by trapping field sediments, nutrients and protecting and enhancing the on-farm ecosystem. Missouri was only 1 of 5 states that was allocated the maximum amount of 20,000 acres. Only 35 states were targeted that have the greatest potential to restore bobwhite quail habitat.

This program is the first time a wildlife species (Bobwhite Quail) will actually pay for itself. This Bobwhite Buffer program will include native warm-season grass, legumes, wildflowers, forbs, and limited shrub plantings. Buffers can be placed around entire crop fields with a minimum width of 30 feet and a maximum width of 120 feet. Incentives for this program include; **A Signup Incentive Payment of up to \$100 per acre, a Practice Incentive Payments of up to 40 percent of the eligible establishment cost, an Annual Rental Payment (Producers will receive annual rental payments for the length of the contract), a Maintenance Incentive Payment, and Cost-share assistance of up to 50 percent of the eligible reimbursable practice costs.**

To be eligible, cropland must be suitably located and adaptable to the establishment of bobwhite quail. In addition, the applicant must satisfy the basic eligibility and cropping history criteria for CRP. To determine individual eligibility for the initiative, landowners should check with their local FSA office. Program participants will apply conservation practice CP33, Habitat Buffers for Upland Birds, around field edges of eligible cropland.

Program sign-up at local FSA offices will begin Oct. 1, 2004, and will run on a continuous basis until the 20,000 acres have been enrolled. For further information, please contact your local FSA.

**Did You Know????** The West Central Missouri Quail Unlimited Chapter won the National Habitat Award for 2004. Congratulations! Your hard work and dedication has improved many acres of quail habitat in West Central Missouri. This is the second year in a row this chapter has received this outstanding honor. Keep up the good work.

**Attention CRP Landowners** – Check with your local USDA-FSA office about cost-share for management activities authorized by the 2002 Farm Bill on existing CRP contracts with grass plantings. Managing your CRP grasses will improve habitat for many grassland birds. Your CRP plan must be modified and you must follow specific dates for management.

For cool season grasses: burn March 15 to May 1, light disk October 1 to December 31, chemically suppress March 15 to May 15 or October 1 to December 1.

For warm season grasses: burn August 15 to March 15, light disk October 1 to December 31, chemically suppress in May and June.

If you choose the light disk or chemical management practices, treat no more than **1/3 of each CRP field** per year. You can prescribe burn up to **1/3 of your CRP contract acres** per year.

Cost share is also available for legume and native wildflower interseeding. This practice must be used in conjunction with one of the other practices listed above. Contact your USDA-FSA office well in advance of your planned CRP management activity to allow adequate time to modify your CRP plan.



## Use Strip Herbicide Applications to encourage Early Successional Vegetation (ESV)

by Steve Fisher, MDC Private Land Conservationist, Chillicothe

Strip herbicide applications are used to provide beneficial food and cover plants for many wildlife species including bobwhite quail, rabbits, deer, pheasant, turkey, and upland songbirds. Applying herbicide in strips to rank CRP or old fields, grasslands, and idle areas can help to impede vegetative growth of grasses, reduce plant litter, and increase forbs and bare ground preferred by these species. The target is to essentially set back succession to the bare-ground stage (50-75%) which encourages high seed-producing annual plants to flourish.

Ideally, strip width should range from 30-75 feet and cover between 1/3 – 1/2 of the field annually. The area between the strips should be 1-2 times as wide as the sprayed strips, so that by the end of the rotation, the whole field has been sprayed. If you are dealing with really thick grass, (cool or warm season) you should mow a few strips and then apply your chemical to the mowed strips. Strips should be placed on the contour across fields and next to brushy cover near the edges. This will help reduce the possibility of erosion and furnish desirable habitat adjacent to other cover types, and travel lanes between them. Application timing will vary, but generally should occur when the grasses have approximately 6-10" of new growth and have depleted their root reserves (generally early spring or fall for Cool-season grasses (CSG), and late spring for Native Warm-season grasses (NWSG). Practice requirements may vary by agency or by incentive program.

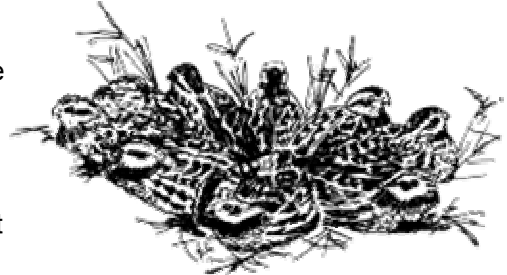
Herbicides used for strip application should primarily target grass species (such as Select, Fusilade, Poast, Assure), however non-selective herbicides can be used (such as Liberty, Round-Up or generic glyphosate). Consult with your ag supplier for more information and always follow the herbicide registration label regarding proper use, application rates, and timing.

Landowners can perform their own strip spraying or they can choose to hire a custom applicator in most areas of the state. Effective applications can be made using small ATV mounted sprayers, but may take more time than truck or tractor mounted units. ATV sprayer units are usually more maneuverable and can get closer to existing cover. Sprayer calibration is the key to properly applying any kind of herbicide, and landowners should check with the local University Extension office for assistance or needed permits. ATV or truck mounted spray equipment may be available to rent or use from your local county SWCD office. Cost-share for strip spraying is available through several agency programs depending on location and eligibility, including: CRP, WHIP, EQIP, and MDC cost-share.

**Did You Know???** NRCS, MDC, and University Extension have created several habitat job sheets to assist landowners implementing wildlife management practices on their farms. These can be picked up at your local USDA-NRCS office or you can find them online. Check them out at [www.coveyheadquarters.com](http://www.coveyheadquarters.com) There are job sheets available on covey headquarter establishment, woody draw and fenceline renovation, downed tree structure, edge feathering, and many others.

## October Covey Call Counts

To keep tabs on the quail population, most successful managers use whistle counts outside of the hunting season, during June and October. Fall whistle counts give an estimate of production and pre-hunting season conditions. The greatest insight will come if you do whistle counts before and after initiating management. Year-to-year counts will allow you to relate quail numbers to weather, local habitat conditions and other changes on the landscape.



Choose listening stations by studying maps and aerial photos. The maximum distance a quail whistle can be heard is 800 yards when sound is carried by a very light breeze. Usually the farthest distance is 500 yards, but trees or tall grasses can further reduce the distance, so listening stations should be located on ridgetops. If you have a large farm and must use more than one listener to cover your property, they should stand at least 1000 yards apart to ensure you are not counting the same covey twice.

Permanently mark your listening stations so they can be used every year. Listen only on clear mornings starting at 45 minutes prior to sunrise during the last 3 weeks of October. Listen until about 10 minutes before sunrise. For best results the wind should be calm and the sky clear. Remember to keep track of all data and keep it on file for year-to-year comparison.

Biologists use an aerial photo and compass to plot the locations of each covey. This allows us to identify occupied habitats and locate birds to flush and count after the morning calling is completed.

## If You Build It.....They Will Come

Most of you are aware of the many Continuous Conservation Reserve Program (CCRP) practices. The Riparian Forest Buffer Practice (CP22) involves planting trees and shrubs on pasture land along the stream bank. This practice is performed to improve the water quality of the stream, stabilize the stream bank, and improve wildlife habitat. Two landowners in Southwest Missouri are already seeing the wildlife benefits. A new CP22 participant in Lawrence Co. planted his trees in April of this year. He sprayed Select herbicide over the entire area to kill/stunt the fescue. He treated the fescue with herbicide because the trees will grow faster without the fescue competing for moisture. By July this landowner had a nice stand of lespedeza, clover, ragweed, and a lot of bare ground in the sprayed area along with his trees. He is now hearing quail along his stream. He hasn't heard quail on this part of his farm in several years. Another CP22 participant in McDonald Co. is seeing similar results. This landowner placed several shrub clumps for quail within his CP22. He is also seeing quail for the first time in several years. On both of these sites the fescue has been suppressed creating bare ground and annual weed growth – perfect quail habitat in the summer months. Contact your local USDA Service Center for information on CCRP. Signup is continuous and USDA staff can visit your farm to see if you qualify. Implementing these practices on your land will help reduce erosion, improve water quality, and create wildlife habitat – QUAIL HABITAT. **Travis Dinsdale**

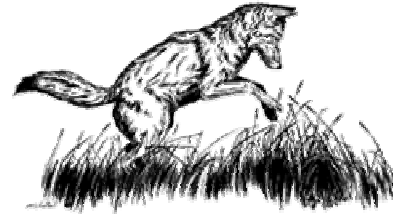
Missouri Prairie Foundation volunteers cleared invasive trees off of a portion of the Katy Trail State Park near Green Ridge to help restore the prairie remnants found along the old railway right of way. Quail responded. Steve Clubine, MDC Grassland Biologist stated "You can count on knocking up a covey at just about every covey headquarters that was left." Tree clearing created the perfect quail habitat along this linear grassland with scattered plum thickets. The surrounding crop field supplies the bare ground, burning of the right of way provides the managed grass and of course the shrubs complete the circle by providing the covey headquarters. Steve estimated 4 coveys in a 1 mile stretch of the Katy Trail.....sorry, no hunting.....this is State Park land.

**Bill White**

# Predator Calling for Dummies

by Paul Frese, NRCS Soil Conservationist (Wildlife), Albany

If you feel like trying your hand at predator calling, fall is a good time to do it. Lots of young, naïve predators are roaming the countryside trying to eke out a living. Bring a gun and a hand call whenever you get outside and see if you can call in a dumb yearling coyote that hasn't had a meal in a while. While young predators are less wary than adults, remember to wear camo and keep the wind in your face.



**Trapping season has been extended this year** - Season dates for badger, bobcat, red fox, mink, opossum, raccoon, and striped skunk are November 15, 2004 – February 15, 2005. Beaver season runs November 15, 2004 – March 31, 2005.

## “The major deficiency of CRP fields is woody cover”

by Tom Dailey, Quail Research Biologist, MDC

This winter quail hunters around the country have an opportunity for some of the best action in years—and it's in Texas. When Texas native rangelands receive rain the vegetation and quail respond big time—one to three quail per acre can be expected. In the Midwest, on the other hand, one quail per acre is rare. Why do Midwest quail coverts, and Conservation Reserve Program (CRP) fields in particular, have a lower quail capacity?

One of the answers, as quoted in the title of this article, is lack of shrubby cover. This statement was made by Dr. Fred Guthery in his book, *On bobwhites* (page 74). Is it true? Yes and no.



Regarding the 'no,' MDC research on the CRP prior to the 2002 Farm Bill documented that CRP fields were unsuitable for quail because the typical grass-choked stands did not provide the 25-50% bare ground that quail require. Moreover, the quail's greatest enemy, tall fescue, dominated the CRP fields. Such fields could not be improved for quail by adding shrubby cover, because the limiting factor is the lack of bare ground, annual weeds and legumes.

On the other hand, CRP since 2002 has required establishment of quail-friendly vegetation, and management--disking, burning, or herbicide--to provide the plant diversity and bare ground that quail need. In these fields the answer to Guthery's statement is YES--shrubby cover can mean more quail.

Quail hunters and managers know that quail depend on shrubby cover for escape and cover from the elements. The quail's attachment to shrubby cover is strongest in winter. In a MDC study of quail in northeast Missouri, quail were found on average 69 feet from shrubby cover—we will call this band around shrubby cover the quail security zone. Many wildlife species depend on such a security zone. I studied bighorn sheep and mountain goats early in my career, and both species avoided predators by staying close to cliffs and rocky outcrops—although expansive meadows were available, sheep and goats limited themselves to areas closest to escape cover.

Everybody knows what a football field looks like, so let's round off the quail's security zone from the measured 69 feet to 80 feet; this is one-half the width of a football field, which is 160 feet wide. This means that if both sidelines of such a field were lined with shrubby cover, a quail sitting anywhere along the midline of the field would be in the security zone. Put another way, 100% of the field is usable by quail. Take away the shrubby cover from one sideline, and usable space is cut in half: by our definition of an 80-foot security distance, with every foot that a quail moves toward the un-wooded sideline it gets further from the shrubby cover that it depends on for escape from predators.

This is the underlying issue that led Fred Guthery to state that CRP's biggest weakness is lack of shrubby cover. This comes mostly from Guthery's study of quail in Texas and Oklahoma rangelands, today's super quail habitats. In these vast expanses of herbaceous vegetation (native grasses, forbs and legumes) there are small patches of shrubby cover everywhere, making virtually all of the herbaceous cover usable by quail. And Guthery's research shows that the key to the rangeland's super abundance (up to 3 quail per acre, or 30 coveys per 100 acres) is that there are millions of acres of mostly 100% usable habitat. Areas that do not have the proper distribution of shrubby cover have lower usability, and resulting lower capacity for quail.

Now picture this—Midwest CRP contracts have virtually no shrubby cover—shrubby cover might surround the field, but rarely is it encouraged in the field. What's the result of this pattern?



Take the average CRP contract in northeast Missouri where MDC has done research—its 16 acres and we'll assume its square in shape. *If* the CRP is bordered by suitable shrubby cover, and we assume this border is 25 feet wide, a quail's security zone extends 80 feet into the CRP portion of the field, and the total field size (CRP plus shrubby border) is about 18 acres.

Only 42% of this field is usable because quail are limited to the shrubby border and the 80-foot security zone extending into the CRP. And because of the absence of

shrubby cover in the CRP, only 35% (5.5 acres) of the 16-acre CRP contract is usable by quail during winter.

This is one big reason why Midwest agricultural fields, whether they are CRP, pasture, or cropland, have far fewer quail than western rangelands. **If you desire to maximize your land's quail potential, and you are taking care of the herbaceous cover, then you must add suitable shrubby cover.**

How much shrubby cover should be present? For the CRP field example, at least 15 covey headquarters, 2,500 square feet in size (50 feet x 50 feet), need to be added to make the entire CRP contract usable. With this design, 16% of the entire field has a shrubby canopy. You can vary the size of the covey headquarters, and include existing woody draws in the field, to arrive at different configurations. Various studies call for 10-20% of the landscape to be shrubby. If covey headquarters, hedgerows, and draws are spaced so quail don't have to fly further than 80 feet or so to get to shrubby cover, conditions are ideal for quail.

Although Missouri has very few landscapes that rival the quail-friendly native rangelands, we can expand our quail population by adding shrubby cover to the foundation that the 2002 farm bill has provided.

## Quail Video Giveaway Was a Success!!

In past issues we have offered a free How-to Quail Management Video. We were overwhelmed with requests. We have given out over 1,500 videos and are nearly out. Please do not request any more videos. We have DVD's available with the same information. If you would the How-to Quail Management DVD please send requests to [jeff.powelson@mdc.mo.gov](mailto:jeff.powelson@mdc.mo.gov) or write to the newsletter address shown. **Please allow 4-6 weeks for your video to be delivered.** Thanks for your continued interest.

## Did You Know????

Each Missouri Department of Conservation Region is in the process of developing Regional Quail Recovery Plans. Please contact your local regional office to find out more about your Regional Quail Recovery Plan and how you can become involved.



## Winter Covey Headquarters Calendar

### October

- \*Sign up for new CCRP practice CP33 Habitat Buffers for Upland Birds begins 10/1.
- \*Spray native grass plantings for invading brome and fescue after a killing frost.
- \*Light disk CRP acres 10/1 – 12/31. For other grasslands, light disk 10/1 – 4/30.
- \*Monitor your quail population with a fall quail covey call census.
- \*Chemically set back CRP cool season grasses now through 12/1.
- \*Spray brome and fescue in fencelines and under shrubs after leaf drop.

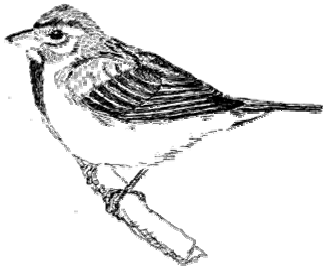
### November

- \*Order tree and shrub seedlings from the MDC nursery now through May.
- \*Conduct edgefeathering, woody fence row and draw renovations now through March.
- \*Basal spray undesirable trees according to herbicide label now through March.
- \*Dormant seeding dates for native warm season grasses and native forbs – 11/15 – 3/31.

### December

- \*12/1 – 3/15 - North Missouri dormant seeding dates for cool season grasses.
- \*12/15 – 2/29 – South Missouri dormant seeding dates for cool season grasses.

**Declining Shrubby Grassland Birds** Many people believe that quail are suffering a long-term decline due to predators, turkeys, etc. However, most people are not aware that birds like loggerhead shrike, grasshopper sparrow and bobolinks, associated with the same habitats as quail, are suffering a decline. Conversely, many birds associated with forested habitats are on the increase. This increase coincides with an increase in forested acres in Missouri. Future issues will feature a new grassland bird, each time, to highlight the plight of birds that use this habitat.



### Dickcissel

The dickcissel is a small sparrow sized bird that can readily be identified by its yellow breast and black bib. It occurs throughout all but the forested regions of Missouri. Dickcissels are late migrants to Missouri, arriving in mid to late April. Males perch in open situations. Their wiry “dick..dick-cissel” song and yellow breast permit easy detection in the field. They breed in weedy overgrown fields with dense grassy and herbaceous vegetation. Nests are typically placed three feet above the ground in briars, shrubs, small trees and clumps of grass.

As with many grassland bird species, dickcissel numbers are declining. They have experienced an average annual decline of 3.5 percent between 1967 and 1989 according to the Breeding Bird Survey (Wilson 1990). Dickcissel numbers fluctuate dramatically from year to year and from place to place. Reasons for these fluctuations are uncertain. The overall decline may be partly due to habitat changes and pesticides. Dickcissels respond to many quail management practices including patch burning. Practices like light disking, native wildflower plantings, and downed tree structures are known to provide important dickcissel habitat. A diversity of cover heights are important for these birds so habitat work performed in narrow strips will increase dickcissel numbers.

## Covey Headquarter Survey Results –

In July a Covey Headquarters Newsletter survey was sent to newsletter recipients in Northwest and Western portions of Missouri. Thanks to all that sent back the survey. We received some great comments and suggestions on how to improve the newsletter. We will try to include some of your article ideas in future issues. Here are some of the results from the survey –

- 82% thought the newsletter has been helpful with their quail restoration efforts.
- 90% believe they understand the basic habitat needs of quail better than before they received the newsletter.
- 90% of you that visited [www.coveyheadquarters.com](http://www.coveyheadquarters.com) found the website helpful.
- 86% of you have hunted quail before.
- 41% of you hunted during the 2003 hunting season.
- 36% of you are part-time farmers with off-farm income.
- 33% of you are landowners with 100% off-farm income.

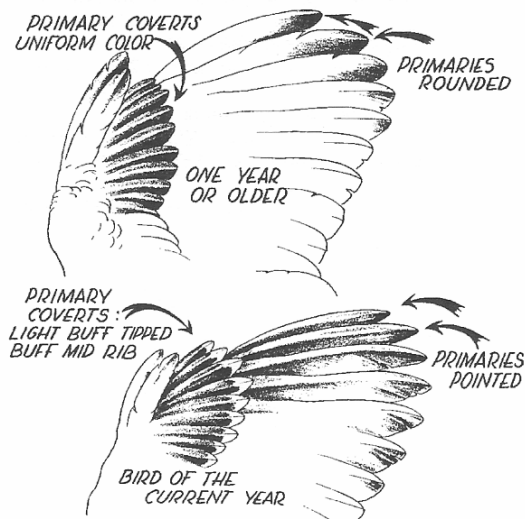
# BOBWHITE QUAIL WING AGING GUIDE FOR USE IN THE FIELD

## Wing Aging Bobwhite Quail

From a study of the wings, it is possible to determine:

- Old birds from young birds-of-the-year.
- The age of birds-of-the-year when they are under 15 weeks of age.
- Field and weather conditions which effected quail production any given year. Compute the age of the birds-of-the-year and count back on the calendar to determine their hatching period.

### YOUNG-OF-THE-YEAR FROM OLD BIRDS



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In this way, knowledge of the ratio of young-to-old birds in the fall population and the time of hatching periods helps your Conservation Commission measure the annual bobwhite production, the condition of the state quail population, and other factors important in the management and regulation of your favorite sport.

### TO AGE YOUR BIRDS

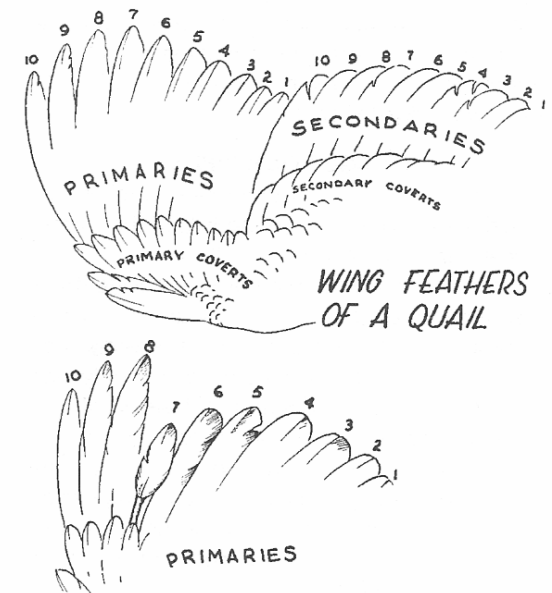
- Check the wings and determine whether the bird is an old bird or a young bird of the current year. (See illustration at left.)
- If the bird is a young-of-the-year, decide if it is under 15 weeks of age by examining primaries number 1 to 8. If any primary has recently been lost or replaced (evident by being only partially grown), the bird is under 15 weeks of age. (See illustration on following page.)
- If under 15 weeks of age, determine the number of the latest primary dropped or replaced.
- Check the aging table below for the number of the primary dropped or replaced, and determine the age of the bird.
- Count back on the calendar, in weeks, the age of the bird, and determine the time of the hatch.

### YOUNG QUAIL AGING TABLE

Number of Last Primary Dropped or Replaced	1	2	3	4	5	6	7	8	All Feathers
Age of Young Quail in Weeks	4	5	6	7	8	9	10.5	14.5	Mature 16.5

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### AGE DETERMINATION OF YOUNG QUAIL UNDER 15 WEEKS OLD



Wing primaries of a quail showing the latest dropping and replacement of number 7 primary. By locating number 7 primary in the aging table on previous page, the bird is found to be 10 1/2 weeks old.

## MARK YOUR CALENDARS

### Prescribed Burn Workshops

#### **December 2, 2004(Thursday evening)**

SW MO. Research Center at Mt. Vernon, MO. 6:00-9:00 p.m. Contact Randy Haas at 417-629-3423 to register, or to inquire about the workshop.

#### **December 4, 2004(Saturday morning)**

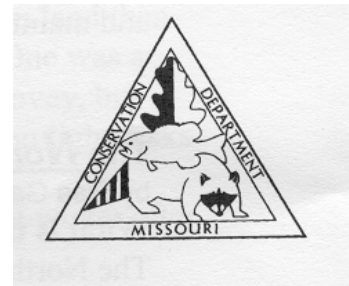
Jasper County Annex Bldg., 105 N. Lincoln, Carthage, MO. 9:00 a.m.-12:00 p.m. Contact Randy Haas at 417-629-3423 to register, or to inquire about the workshop.

#### **December 7th, 2004(Tuesday evening)**

Lamar Memorial Hall basement, at the corner of 11th & Broadway, Lamar, MO. 6:00-9:00 p.m. Contact Randy Haas at 417-629-3423 to register, or to inquire about the workshop.

UNIVERSITY OF MISSOURI  
 Extension

 NRCS Natural Resources  
Conservation Service



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